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EXAMINER

SPITTLE, MATTHEW D

ART UNIT PAPER NUMBER

2111

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/722,961

Applicant(s)

EDE, CLIFFORD

Examiner

Matthew D. Spittle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-19 and 22-26 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see page 18, section III, filed March 13, 2006, with respect to claim 12 have been fully considered and are persuasive. The rejection of claim 12 has been withdrawn.

With regard to claim 1 in reference to Duso et al., in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a USB bus) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to claim 1 in reference to Tomaszewski, Applicant has argued that Tomaszewski does not disclose "an interface connectable as a default host interface to a peripheral or as a default peripheral interface to a host." Examiner interprets the meaning of a default host and default peripheral to mean the host or peripheral that is ordinarily chosen as such, unless specified otherwise. In view of this interpretation, Examiner notes that host port 108 is ordinarily designated as a host by default, since it resides on a host computer system (paragraph 17). Similarly, since a digital camera is a peripheral device in a computer system, it is ordinarily designated as a peripheral by default.

With regard to applicant's additional arguments in reference to Tomaszewski, in response to applicant's argument that the references fail to show certain features of

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applicant's invention, it is noted that the features upon which applicant relies (i.e., using only standard protocols in order to detect the connection of a peripheral device) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to applicant's arguments in reference to Burke et al., Applicant has argued that Burke et al. does not disclose "an interface connectable as a default host interface to a peripheral or as a default peripheral interface to a host." Examiner interprets the meaning of a default host and default peripheral to mean the host or peripheral that is ordinarily chosen as such, unless specified otherwise. In view of this interpretation, Examiner notes that the system of Burke et al. contains a USB Host Interface (20), which is designated as such by default. Similarly, since a USB Mouse (15) and USB Keyboard (19) are peripheral devices in a computer system, they are ordinarily designated as a peripherals by default.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., using only standard protocols, and not using any new specific circuitry in order to detect the connection of a peripheral device) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that Chandler et al. does not disclose using SRP for checking if a device is connected, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Additionally, in section 5.3.11, Chandler et al. teach that the B-device may repeat using the SRP any time that the initial conditions taught in section 5.3.2 are met, and therefore, nothing would prevent it from repeating the SRP as periodically as desired.

### ***Specification***

The amendment filed on March 13<sup>th</sup>, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "detection means for detecting the absence of a reply signal and the disconnection of the peripheral."

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 15, 17, 25, and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 15, 17, 25, and 26 recite "detection means for detecting the absence of a reply signal and the disconnection of the peripheral." This is new matter.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Duso et al.

With regard to claim 1, Duso et al. describe an interface connectable as a default host interface to a peripheral or as a default peripheral interface to a host, for serial data communication between host and peripheral during a session, and comprising:

Automated means for periodically checking a connection by periodically starting a session when connected as a default host interface (where a default host may be interpreted as a master controller server, and where "starting a session" may be interpreted as polling the peripheral; column 51, lines 25 – 39).

Automated means for periodically checking a connection by periodically requesting a session when connected as a default peripheral interface (where a default peripheral may be interpreted as a slave controller server, and where "requesting a session" may be interpreted as polling the host; column 51, lines 25 – 39; column 52, lines 5 – 8).

Duso et al. implicitly state a serial data communication, in the form of Ethernet communication, which is evidenced by a serial means of data transfer according to the IEEE Computer Society, page 45, paragraph 3.

With regard to claim 2, Duso et al. describe an interface as claimed in claim 1, wherein a session identifies the presence of a connected device (Duso et al. describe using a heartbeat signal to determine if there is a failure in the master or slave. Examiner identifies a failure as comprising the master or slave being or becoming disconnected. Column 51, lines 25 – 39; column 52, lines 5 – 8).

With regard to claim 22, Duso et al. teach a master controller server and a slave controller server; either of which can assume master or slave status. Examiner identifies both of these servers as "dual-mode" devices (column 51, lines 30 – 39).

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Therefore, Duso et al. teach a method of checking a serial data connection between a dual mode device and another device comprising:

Periodically starting a session at the device connected as host when the dual-mode device is connected as a default host (where the default host may be interpreted as a master controller server; column 51, lines 25 – 39);

Periodically requesting the start of a session at the device connected as a peripheral when the dual-mode device is connected as a default peripheral (where the default peripheral may be interpreted as a slave controller server; column 51, lines 25 – 39).

\* \* \*

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomaszewski.

With regard to claim 1, Tomaszewski describes an interface connectable as a default host to a peripheral or as a default peripheral to a host, for serial data communication between host and peripheral during a session, and comprising:

Automated means for periodically checking a connection by periodically starting a session when connected as a default host (where a serial data communication may be interpreted as a Universal Serial bus and where “starting a session” may be interpreted as polling the hub; Tomaszewski implicitly state this function as evidenced by Compaq et al. which describe the host querying the hub to determine the status of USB devices on each of its ports (page 20, section 4.6.1). Additionally, Tomaszewski implicitly describes how often this occurs as evidenced by Peters et al. Peters et al.



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describe in U.S. patent 6,898,652 that in a conventional USB system a USB host device periodically polls each attached hub device to determine the state of the hub's active downstream ports (column 3, lines 50 – 53). Therefore, this function is inherently present in the invention of Tomaszewski since it discloses a USB bus.

Automated means for periodically checking a connection by periodically requesting a session when connected as a default peripheral (where a default peripheral may be interpreted as a digital camera, and where "requesting a session" may be interpreted as polling the VBUS bit; paragraphs 30, 31).

With regard to claim 5, Tomaszewski fails to explicitly describe the session identifying the capabilities of a connected device. Compaq et al. describe in the USB 2.0 specification that the capabilities of a device are identified during the enumeration step when the host requests the configuration information (pages 243 – 245, sections 9.1.2, 9.2.3). Therefore, this feature is inherently present in the invention of Tomaszewski, since he clearly identifies USB as the communication bus used.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaszewski in view of Burke et al.

With regard to claim 3, Tomaszewski teaches a power signal contact (Figure 2, item 200), at least one data signal contact (Figure 2, items 210, 212), but fails to teach when connected as the default host, the means for periodically checking a connection is operable to periodically apply a voltage to the power signal contact and receive a response via the data signal contact.

Burke et al. teach a power signal contact, at least one data signal contact, wherein, when connected as a default host, the means for periodically checking a connection is operable to periodically apply a voltage to the power signal contact and receive a response via the data signal contact (where a default host may be interpreted as a wake-up controller, a power signal contact may be interpreted as Vbus, and a data signal contact may be interpreted as a secondary serial interface; Figure 2, 3; column 4, lines 33 – 48, claim 4).

It would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the invention of Tomaszewski to incorporate the wake-up controller of Burke et al. in order to allow for power management of USB peripheral devices while the host computer system is in a suspend state. This would have been obvious since it is well known in the art that reducing the power consumption of electronic devices reduces the costs of operating those devices.

\* \* \*

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaszewski in view of Burke et al., and further in view of Chandler et al.

With regard to claim 4, Tomaszewski and Burke et al. fail to explicitly teach when connected as a default peripheral, the means for periodically checking a connection is operable to periodically request a session via the power signal contact and the data signal contact and receive a response via the power signal contact.

Chandler et al. teach in the USB OTG Specification Rev 1.0a that a peripheral device may pulse the Vbus signal and the data signal(s) in order to request a session according to the Session Request Protocol. The host device replies to the request by activating the Vbus signal. Examiner interprets this as being equivalent to a reply signal via the power signal contact (pages 37 – 40, section 5.3).

It would have been obvious to one of ordinary skill in this art to include the features of USB On-The-Go in the invention of Tomaszewski and Burke et al. in order to provide a USB peripheral device with a means of requesting a session from a host

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device. This would have been obvious since Chandler et al. teach a plurality of other improvements that USB On-The-Go adds to the conventional USB 2.0 specification, including support for portable devices with small interface cables, dual-role devices, Session Request protocol, Host Negotiation protocol, and features which allow two or more USB devices to communicate directly.

\* \* \*

Claims 6, 7, 11, 13, 14, 15, 16, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke et al. in view of Chandler et al.

With regard to claim 6, Burke et al. teach an interface, for serial data communication between a host and a peripheral, connectable as a default host or a default peripheral and comprising:

A power signal contact (Figure 2, Vbus)

At least one data signal contact (Figure 2, D+, D-)

Transmission means for repeatedly sending a poll signal via the power signal contact (column 4, lines 33 – 48);

Receiving a reply signal via the data signal contact if the device is connected as a default host (where a default host may be interpreted as a wake-up controller, and a data signal contact may be interpreted as a secondary serial interface; Figure 2, 3; column 4, lines 33 – 48, claim 4).

Burke et al. fail to teach reception means for receiving a reply signal via the power signal contact, if the device is connected as a default peripheral interface and the data signal contact if the device is connected as a default host interface.

Chandler et al. teach that a peripheral device may pulse the Vbus signal and the data signal(s) in order to request a session according to the Session Request Protocol. The host device replies to the request by activating the Vbus signal. Examiner interprets this as being equivalent to a reply signal via the power signal contact (pages 37 – 40, section 5.3).

It would have been obvious to one of ordinary skill in this art to include the features of USB On-The-Go in the invention of Burke et al. in order to provide a USB peripheral device with a means of requesting a session from a host device. This would have been obvious since Chandler et al. teach a plurality of other improvements that USB On-The-Go adds to increase the flexibility of the conventional USB 2.0 specification, including support for portable devices with small interface cables, dual-role devices, Session Request protocol, Host Negotiation protocol, and features which allow two or more USB devices to communicate directly.

With regard to claim 7, Burke et al. and Chandler et al. teach the poll signals being sent periodically, and implicitly describe them as a train of voltage pulses. Burke et al. and Chandler et al. teach using the Universal Serial Bus, which is understood to be a means of digital data transmission where voltage pulses are used to differentiate between a logic 0 and logic 1. For this reason, the system of Burke et al. and Chandler

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et al. inherently teach the limitation where the poll signals are sent as a train of voltage pulses.

With regard to claim 11, Chandler et al. teach the additional limitation wherein the transmission means is operable to repeatedly send both a first poll signal via the power signal contact and a second poll signal via the data signal contact, if the interface is connected as a default peripheral interface (as taught by the Session Request Protocol; pages 37 – 40, section 5.3).

With regard to claim 13, Burke et al. and Chandler et al. teach the additional limitation wherein the reply message identifies the presence of a connected device. Burke et al. teach the host (wake-up controller) polling the peripheral device (column 4, lines 33 – 48). If a stimulus is received by the peripheral, the computer system is woken up. One of ordinary skill in this art would have found it obvious that a stimulus received by a peripheral identifies the presence of that peripheral.

Chandler et al. teach the peripheral polling the host device. In this case, the peripheral polls the host device and awaits 5 seconds for a response. One of ordinary skill in this art would have found it obvious that a response received by the host identifies the presence of the host (pages 37 – 40, section 5.3).

With regard to claim 14, Burke et al. and Chandler et al. implicitly teach an interface as claimed in claim 6 wherein an session is started that identifies the

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capabilities of the connected device. Compaq et al. describe in the USB 2.0 specification that the capabilities of a device are identified during the enumeration step when the host requests the configuration information (pages 243 – 245, sections 9.1.2, 9.2.3). Therefore, this feature is inherently present in the invention of Burke et al. and Chandler et al. since they clearly identify USB as the communication bus used.

With regard to claim 15, Burke et al. teach the additional limitation of a host interface for serial data communication between a host and a connected peripheral during a session:

A power signal contact for supplying power to the connected peripheral (Figure 2, Vbus);

At least one data signal contact for serially communicating data between the host and connected peripheral (Figure 2, D+, D-);

Means for periodically checking the connection to the peripheral comprising:

Transmission means for repeatedly sending a poll signal via the power signal contact (where a transmission means is provided by the wake-up controller; Figure 2, item 34; column 4, lines 33 – 48).

Reception means for receiving a reply signal via the data signal contact (where a reception means is provided by the secondary serial interface; Figure 3, item 41; column 4, lines 33 – 48).

With regard to claim 16, Burke et al. teach the additional limitation of a host interface arranged to periodically start a session on its own initiative (column 4, lines 33 – 48), but fail to teach starting a session in response to periodic requests from the connected peripheral.

Chandler et al. teach the host starting a session in response to periodic requests from the connected peripheral (as taught in the Session Request Protocol; pages 37 – 40, section 5.3).

With regard to claim 24, Burke et al. teach an interface, for serial data communication between a host and a peripheral, connectable as a default host or a default peripheral and comprising:

A power signal contact (Figure 2, Vbus)

At least one data signal contact (Figure 2, D+, D-)

Electronic circuitry for repeatedly sending a poll signal via the power signal contact (column 4, lines 33 – 48);

Receiving a reply signal via the data signal contact if the device is connected as a default host (where a default host may be interpreted as a wake-up controller, and a data signal contact may be interpreted as a secondary serial interface; Figure 2, 3; column 4, lines 33 – 48, claim 4).

Burke et al. fail to teach electronic circuitry for receiving a reply signal via the power signal contact, if the device is connected as a default peripheral and the data signal contact if the device is connected as a default host.



Chandler et al. teach that a peripheral device may pulse the Vbus signal and the data signal(s) in order to request a session according to the Session Request Protocol. The host device replies to the request by activating the Vbus signal. Examiner interprets this as being equivalent to a reply signal via the power signal contact (pages 37 – 40, section 5.3).

With regard to claim 25, Burke et al. teach the additional limitation of a host interface for serial data communication between a host and a connected peripheral during a session:

A power signal contact for supplying power to the connected peripheral (Figure 2, Vbus);

At least one data signal contact for serially communicating data between the host and connected peripheral (Figure 2, D+, D-);

Electronic circuitry for periodically checking the connection to the peripheral comprising:

Electronic circuitry arranged to repeatedly sending a poll signal via the power signal contact (where a transmission means is provided by the wake-up controller; Figure 2, item 34; column 4, lines 33 – 48) and arranged to receive a reply signal via the data signal contact (where a reception means is provided by the secondary serial interface; Figure 3, item 41; column 4, lines 33 – 48).

Claims 17, 18, 19, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaszewski in view of Chandler et al.

With regard to claim 17, Tomaszewski teaches a peripheral interface for serial data communication between a connected host and a peripheral during a session:

A power signal contact for receiving power from the connected host (Figure 2, item 200);

At least one data signal contact for serially communicating data between the connected host and peripheral (Figure 2, items 210, 212);

Tomaszewski teaches a means for periodically checking the connection to the host (paragraphs 30, 31; where the camera's VBUS signal checker polls the status of the host connection) but fails to teach repeatedly sending a first poll signal via the power signal contact and for repeatedly sending a second poll signal via the data signal contact, along with reception means for receiving a reply signal via the power signal contact.

Chandler et al. teach a transmission means for repeatedly sending a first poll signal via the power signal contact and for repeatedly sending a second poll signal via the data signal contact (as taught by the Session Request Protocol; pages 37 – 40, section 5.3).

Additionally, Chandler et al. teach reception means for receiving a reply signal via the power signal contact. Chandler et al. teach that a peripheral device may pulse the Vbus signal and the data signal(s) in order to request a session according to the Session Request Protocol. The host device replies to the request by activating the

Vbus signal. Examiner interprets this as being equivalent to a reply signal via the power signal contact (pages 37 – 40, section 5.3).

It would have been obvious to one of ordinary skill in this art to include the features of USB On-The-Go in the invention of Tomaszewski in order to provide a USB peripheral device with a means of requesting a session from a host device. This would have been obvious since Chandler et al. teach a plurality of other improvements that USB On-The-Go adds to increase the flexibility of the conventional USB 2.0 specification, including support for portable devices with small interface cables, dual-role devices, Session Request protocol, Host Negotiation protocol, and features which allow two or more USB devices to communicate directly.

With regard to claim 18, Tomaszewski teaches the additional limitation where the peripheral interface is arranged to periodically request a session (paragraphs 30, 31; where the camera's VBUS signal checker polls the host's connectivity).

With regard to claim 19, Chandler et al. teach the additional limitation wherein each request has a duration less than 100ms (page 39, section 5.3.8; where a B-device may be interpreted as a peripheral).

With regard to claim 23, Tomaszewski teaches an interface connectable as a default host to a peripheral or as a default peripheral to a host, for serial data communication between host and peripheral during a session, and comprising:

A transceiver arranged to periodically requesting a session when connected as a default peripheral (paragraphs 30, 31; where the camera's VBUS signal checker polls the host's connectivity). Tomaszewski fails to explicitly teach a transceiver, however Compaq et al. teach the use of a transceiver in USB applications throughout Chapter 7 as required in order to provide a necessary means of protecting a USB device from damage due to a short circuit. Therefore, a transceiver is inherent in the invention of Tomaszewski since Tomaszewski teaches a USB bus.

Additionally, Tomaszewski fails to explicitly teach periodical checking a connection by periodically starting a session when connected as a default host.

Compaq et al. teach that the host queries the hub to determine the status of USB devices on each of its ports, but fail to describe how often this occurs (page 20, section 4.6.1). Peters et al. describe in U.S. patent 6,898,652 that in a conventional USB system a USB host device periodically polls each attached hub device to determine the state of the hub's active downstream ports (column 3, lines 50 – 53). Therefore, this function is inherently present in the invention of Tomaszewski since it describes a USB bus);

With regard to claim 26, Tomaszewski teaches a peripheral interface for serial data communication between a connected host and a peripheral during a session:

A power signal contact for receiving power from the connected host (Figure 2, item 200);

At least one data signal contact for serially communicating data between the connected host and peripheral (Figure 2, items 210, 212);

Tomaszewski teaches a electronic circuitry for periodically checking the connection to the host (paragraphs 30, 31; where the camera's VBUS signal checker polls the status of the host connection) but fails to teach repeatedly sending a first poll signal via the power signal contact and for repeatedly sending a second poll signal via the data signal contact, along with reception means for receiving a reply signal via the power signal contact.

Chandler et al. teach electronic circuitry arranged to repeatedly send a first poll signal via the power signal contact and to repeatedly send a second poll signal via the data signal contact (as taught by the Session Request Protocol; pages 37 – 40, section 5.3).

Additionally, Chandler et al. teach electronic circuitry arranged to receive a reply signal via the power signal contact. Chandler et al. teach that a peripheral device may pulse the Vbus signal and the data signal(s) in order to request a session according to the Session Request Protocol. The host device replies to the request by activating the Vbus signal. Examiner interprets this as being equivalent to a reply signal via the power signal contact (pages 37 – 40, section 5.3).

***Allowable Subject Matter***

Claims 8, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Spittle whose telephone number is (571) 272-2467. The examiner can normally be reached on Monday - Friday, 8 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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